Amendments to the Written Description of the Specification

Applicant presents replacement paragraphs below indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

On page 1, after the title insert: --Background Of The Invention--;

On page 1, after "Background of the Invention" but before the first paragraph insert -- Field of the Invention--;

On page 1, before the second paragraph beginning on line 4, insert --Discussion of the Related Art--;

Please amend the paragraph beginning on page 1, line 21 through page 2, line 2, as shown below:

The number of test terminals 22 may be on the same order of magnitude as the number of input/output terminals 16, for example, 200 to 400 terminals. Test terminals 22 as well as the connections of monitoring circuit 18 take up a significant silicon surface area, which causes an unwanted increase in the circuit cost. For this purpose, a first version of integrated circuit 10 comprising monitoring circuit 18 and test terminals 22 is produced in small quantities to debug the program of microprocessor 12 or "user program". After this debugging, a version of integrated circuit 10 rid of monitoring circuit 18 and of test terminals 22 is sold. This ~~implies the~~ requires forming ~~of~~ two versions of the integrated circuit, which requires a significant amount of work and is relatively expensive. Further, the final chip is not necessarily identical to the tested chip.

Please amend the third full paragraph on page 2, lines 13-16 as shown below:

Thus, standard IEEE-ISTO-5001 in process provides, in its 1999 version, accessible, for example, on website www.ieee-isto.org/Nexus5001, a specific message exchange protocol between a monitoring circuit and an analysis tool for a monitoring circuit 18 requiring but a reduced number of test terminals 22.

Please amend the paragraph beginning on page 3, line 21 through page 4, line 2 as shown below:

To measure the time elapsed between the storage of two messages, a solution consists of including, in monitoring circuit 18, a counter rated at a predetermined frequency, with a counting that varies along time. It is enough to add in each message a data field containing the counting at the time when each message is stored to date this time. However, for such a dating to be sufficiently accurate, the counter must be rated at a high frequency. The counting thus very rapidly increases and the counter must have a large size not to be saturated. Such a counter takes up a significant surface area, which is not desirable. Further, the introduction of the counting in the messages substantially increases the message size. The messages comprising the counting must be divided into a large number of segments, the transmission of which monopolizes the test terminals for a long time, which is not desirable.

On page 4, before line 3, insert --Summary of the Invention--;

Please amend the third full paragraph on page 4, lines 9-19 as shown below:

To achieve these and other objects, the present invention provides a monitoring device integrated ~~to~~ on the chip of a microprocessor executing a sequence of instructions, comprising: a message calculation means for, on each execution of an instruction from among a plurality of instructions of predetermined types, generating a digital message corresponding to the executed instruction; a buffer memory for storing each generated message; and a plurality of output terminals connected to an external analysis tool; each output terminal being associated with one of the instruction types and the message calculation means modifying the state of the output terminal associated with an instruction type at the time when a message corresponding to said instruction type is buffered.

On page 5, before line 21, insert --Brief Description of the Drawings--;
On page 6, before line 2, insert --Detailed Description--;

Please amend the first full paragraph on page 7, lines 3-10 as shown below:

According to the present invention, calculation means 36 comprises an output terminal FA connected to test terminal 28. Means 36 is provided to modify the value (1 or 0) of its output terminal FA (and of test terminal 28) each time means 36 stores a message in area A of buffer memory 34. Analysis tool 24 is provided to ~~memorize~~ store the state switching times of test terminal 28, that is, the jump message storage times. The analysis tools thus knows that a first jump message received from buffer memory 34 has been generated and stored at the time of the first state switching of test terminal 28, and so on.

On page 10, line 12, please insert:

--Such alterations, modifications, and improvements are intended to be part of this disclosure, and are intended to be within the spirit and the scope of the present invention. Accordingly, the foregoing description is by way of example only and is not intended to be limiting. The present invention is limited only as defined in the following claims and the equivalents thereto.

What is claimed is:--